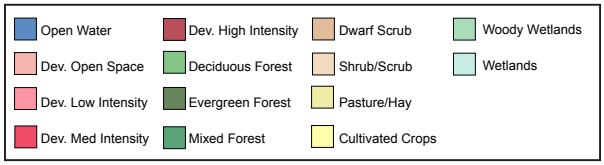
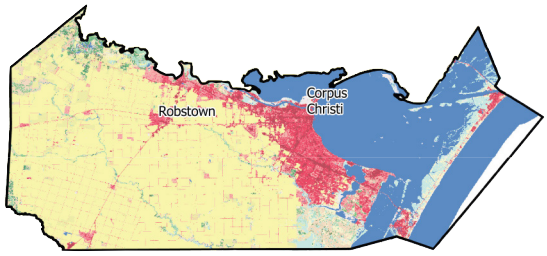
U.S. DEPARTMENT OF ENERGY | Office of Economic Impact and Diversity

Nueces County Overview:
Land Use, Energy Production, Health Risks, and Disadvantaged Communities

Land Cover[1]

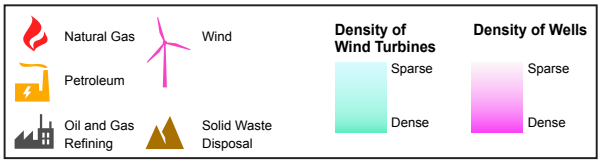
The land cover of a region can indicate the types of economic activities and roles of industry, agriculture, transportation and development in the region. The image **on the right** shows the **urban** development from low to high intensity **in red**, particularly around the port. However, much of the county is also devoted to agriculture and cultivated crops. According to the Energy Information Administration, in Texas the largest consumer of energy is the industrial sector.

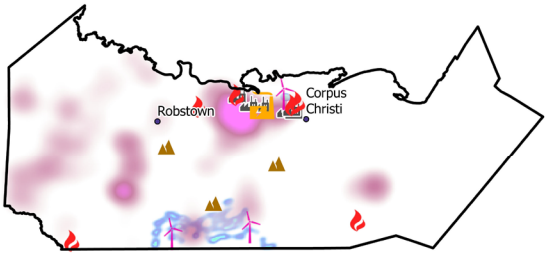




Energy Overview[2, 3, 4, 5]

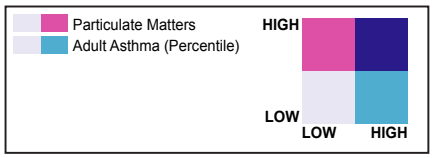
The energy system in the area reflects a fossil fuel dependence (gas and petroleum) and some wind. In the U.S. Texas is the top producer of crude oil and natural gas. Texas is also the nation's 2nd highest exporter of Liquid Natural Gas (LNG). In the image you can see the density of wells. However, in the southern part of Nueces county, we see some wind farms. Investment in carbon-free technologies could have a beneficial impact on the regions' health. The Department of Energy has several open opportunities to accelerate the energy transition.

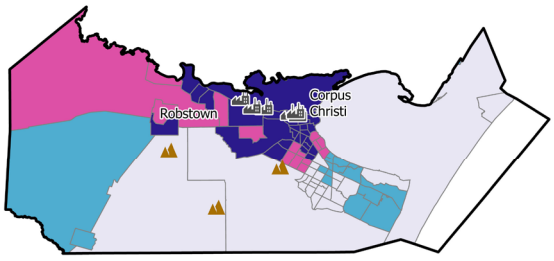




PM2.5 and Asthma[6, 7, 8]

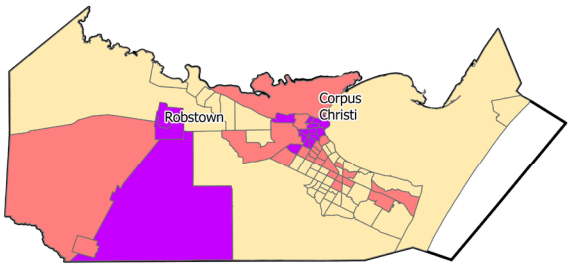
Exposure to high levels of air pollution can cause adverse health effects like respiratory infections, heart disease and lung cancer. According to the World Health Organization, the most health-harmful pollutants are fine particulate matters (PM2.5) that penetrate deep into the lungs. This image shows the prevalence in the region of PM2.5 and of asthma among adults on low to high scales. Notice that in Nueces the high PM2.5 and resulting high adult asthma is concentrated near the oil and gas refineries.





Identifying Disadvantaged Communities[9]

The DAC reporter and the CEJST Tool bring together data from many sources to identify burdens that people in census tracts face. DOE focuses on those with the highest cumulative burden and identifies 15 census tracts (17% of the population) as living in highly burdened tracts. CEJST is broader and includes more tracts, identifying 82 census tracts (46% of the population). Items that burden the region include, limited internet access, lead paint in older homes, high share of people without a car, the proximity to pollution and remediation sites among others.



Data Sources:

[1] National Land Cover Database: https://www.usgs.gov/centers/eros/science/national-land-cover-database

[2] U.S. Energy Information Administration (EIA): https://www.eia.gov/

[3] US Wind Turbines Database: https://eerscmap.usgs.gov/uswtdb/

[4] FracTracker Oil and Gas Infrastructure Data - https://www.fractracker.org/map/

[5] EPA Facility Registry Service (FRS) - GHG data and facility data https://hifld-geoplatform.opendata.arcgis.com/datasets/geoplatform::-environmental-protection-agency-epa-facility-registry-service-frs-power-plants/explore

[6, 8] DOE DAC Reporter https://energyjustice.egs.anl.gov/, PM2.5 from EPA EJScreen PM2.5 Index

[7, 9] Climate Economic Justice Screening Tool - https://screeningtool.geoplatform.gov/en/downloads#3/33.47/-97.5 - Asthma Indicator